

**What is claimed is:**

1. A method for designing filters that approximates the circularly symmetric frequency response achievable using a non-separable filter comprising:
  - (a) selecting a cut-off frequency and designing therefrom a 1-D low pass filter **LP** such that:  $\mathbf{LP} = [X_{-n}, X_{-(n-1)}, \dots X_0, \dots X_{n-1}, X_n]$ ;
  - (b) obtaining a 2-D filter **LPP** by performing the operation:  $\mathbf{LP}^* \times \mathbf{LP}$  wherein  $\mathbf{LP}^*$  is a column vector having the same entries as **LP** and **LPP** having dimensions given by:  $\{2n+1, 2n+1\}$  and generating a 2-D countour plot therefor;
  - (c) designing a 1-D high pass filter **HP** such that:  $\mathbf{HP} = [Y_{-m}, Y_{-(m-1)}, \dots Y_0, \dots Y_{m-1}, Y_m]$ ;
  - (d) obtaining a 2-D filter **HPP** by performing the operation:  $\mathbf{HP}^* \times \mathbf{HP}$  wherein  $\mathbf{HP}^*$  is a column vector having the same entries as **HP** and **HPP** having dimensions:  $\{2m+1, 2m+1\}$  and obtaining a 2-D contour plot therefor;
  - (e) repeating (c) through (d) until the 2-D contour plot of **HPP** overlaps the 2-D countour plot of **LPP**;
  - (f) generating a 2-D filter **ONE** having the dimensions of that of **HPP** with the only non-zero entry of value 1 located at the center of **ONE**;
  - (g) creating matrix **HPPinv** by subtracting **HPP** from **ONE**;
  - (h) convolving **LPP** with **HPPinv** to obtain **DSCRN** having dimensions:  $\{2m+2n+1, 2m+2n+1\}$  and obtaining a 2-D contour plot therefor; and
  - (i) repeating (a) through (h) until, by an examination of the 2-D contour plot of **DSCRN**, an approximation to a desired circular symmetry is achieved.

2. A method as in **claim 1**, wherein the dimensions of filters **LPP** & **HPP** are such that the processing by a target media processor, Very Long Instruction Word (VLIW) processor, or Digital Signal Processor (DSP) is optimized.
3. A method as in **claim 1**, wherein one would descreen not by using the non-separable filter **DSCRN** but by first applying the separable filter **LPP** and saving that result as, for example, video\_1.
4. A method as in **claim 3**, further comprising applying the **HPP** filter to video\_1 and saving that output as, for example, video\_2.
5. A method as in **claim 4**, further comprising subtracting video\_2 from video\_1 to yield descreened output.
6. A method as in **claim 5**, wherein **DSCRN** is applied to image data to determine whether the generated result accomplished an intended result.